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Weighing the snow core to determine the water content

FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for

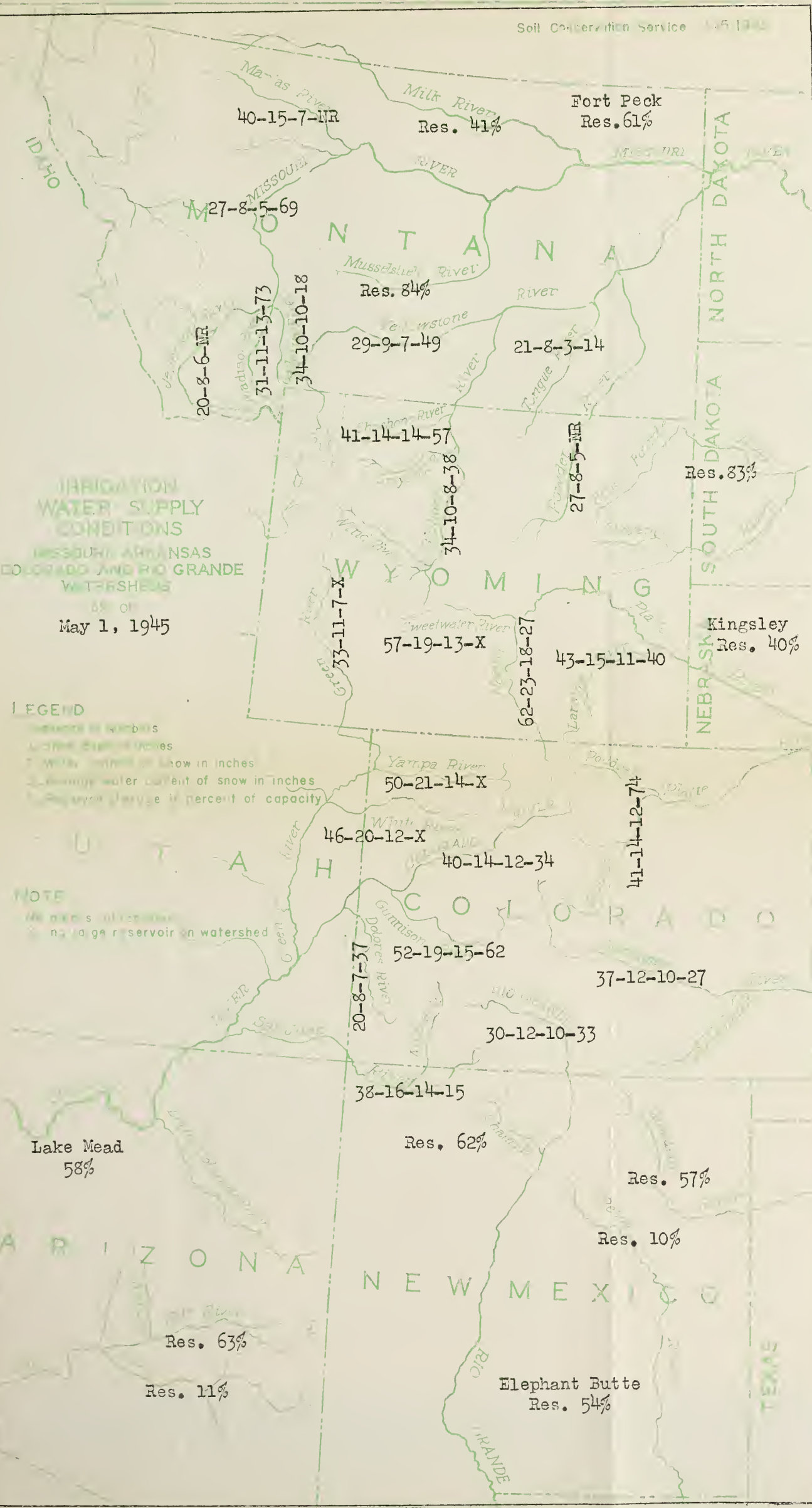
COLORADO RIVER DRAINAGE BASIN

MAY 1, 1945

By

Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Colorado Agricultural Experiment Station

Data included in this report were obtained by the agencies named above in cooperation with the U. S. Forest Service, National Park Service, State Engineers of Colorado, Wyoming and New Mexico and other Federal, State and local organizations.



IRRIGATION
WATER SUPPLY
CONDITIONS
MISSOURI, ARKANSAS
COLORADO AND RIO GRANDE
WATERSHEDS
AS OF

May 1, 1945

LEGEND

- 1. Reservoir in percent
- 2. Dam in percent
- 3. Water content of snow in inches
- 4. Average water content of snow in inches
- 5. Reservoir storage in percent of capacity

NOTE

- 1. No dam or reservoir in watershed
- 2. No dam or reservoir in watershed

Lake Mead
58%

Res. 63%

Res. 11%

Res. 62%

Res. 57%

Res. 10%

Elephant Butte
Res. 54%

Res. 83%

Kingsley
Res. 40%

Res. 41%

Res. 84%

57-19-13-X

50-21-14-X

46-20-12-X

40-14-12-34

52-19-15-62

37-12-10-27

30-12-10-33

38-16-14-15

27-8-5-69

20-8-6-MR

31-11-13-73

34-10-10-18

41-14-14-57

34-10-8-38

33-11-7-X

62-23-18-27

43-15-11-40

27-8-5-MR

41-14-12-74

MAY 1, 1945

WATER SUPPLY OUTLOOK

COLORADO RIVER

Improvement has occurred in the water supply outlook for the Colorado River and its tributaries in Colorado and Wyoming during April. Runoff will be normal or slightly above if average precipitation occurs during May and June. Due to favorable storage in the Salt River reservoirs ample water will be available for irrigation in this area. The water supply outlook for the Gila River is less satisfactory because storage in San Carlos reservoir is much below normal.

COLORADO RIVER AND TRIBUTARIES
ABOVE GRAND JUNCTION IN COLORADO

A substantial increase in the water content of the snow cover on this drainage was realized during April, which on the average was 1.6 inches. At Lake Irene, on the Trail Ridge Road in the Rocky Mountain National Park, the April storms increased the snow-water storage 9 inches, the greatest amount recorded for the several snow courses on this drainage area. The present water content averages 14.2 inches which is about 2 inches more than a year ago. The runoff prospects for this section of the Colorado River drainage have improved over that of a month ago, largely because of the material increase in the water content of the snow in the Grand Lake area. It is likely that the summer flow of this stream at Glenwood Springs will very closely approach the normal. Soil moisture conditions have improved over the upper drainage area as well as the irrigated lands in the lower valley. Precipitation at Grand Junction was more than the April normal during the first half of the month. Stream flow is increasing due to the snow melt at the lower elevations. Range and crop conditions are reported to be fair to good.

GUNNISON RIVER

April storms brought an added two inches of water to the snow cover on the high mountain areas which brings the water content equal to that of a year ago at this time. At Trickle Divide, on Grand Mesa, the recent snow measurements show the water content to have increased more than four inches during the past month to a total of 37 with an average snow depth of 7½ feet. At the lower elevations melting has occurred which has caused a rise in stage in this stream and its tributaries during the last few days of the month. Storms over the drainage have improved the soil moisture generally throughout the irrigated area. Spring is somewhat backward in the upper Gunnison and Uncompahgre districts. Reservoirs on the Grand Mesa will fill to capacity, likewise the Taylor Park reservoir. Runoff

in the Gunnison this season will be normal or better. Unless above-normal temperatures prevail over the watershed, no unusually high stage of the river is anticipated.

YAMPA AND WHITE RIVERS

On the Yampa drainage the average accumulation of water in the snow during April was slightly more than one inch. On Rabbit Ears Pass there was added nearly 3 inches. The present water content is greater than last year at this time by more than 4 inches. Snow cover on the lower areas has been slow in melting this spring. Generally because of normal precipitation and good snow over the farming areas the soil moisture conditions are now good to excellent and stream flow is reported to be slightly above normal. There are a number of small reservoirs, supplied from low elevation drainage areas, which are now full to capacity. The summer flow of this stream and its tributaries will probably exceed the normal and it is expected that the river will remain at a good stage well into the late summer months.

The present snow pack on the headwaters of the White remained about the same during April, however, since the water content is now above that of last year by nearly 3 inches, the flow of this stream can be expected to hold up well throughout the entire summer. The total annual contribution of this stream to the Green and hence to the Colorado, during 1945, may be close to one-half million acre-feet.

DOLORES RIVER

April storms over the watershed of the Dolores River added little to the water content of the snow cover. Melting at the lower elevations during the past month has increased the stream flow to normal stage at this time of the season. Precipitation during April has brought the soil moisture in the farming districts up to an excellent condition. Crop and range prospects are reported to be good. Storage is improving but it is doubtful if the Groundhog Reservoir will fill this season. There is now in storage in this reservoir 8,000 acre feet which is about 40 percent of its capacity. The Narraguinepp now has 9,300 acre-feet in storage which is the same as it was a year ago. The outlook for the coming season's irrigation water supply is fairly good and no serious water shortage is anticipated. It is quite likely that the river flow will not be sustained much after mid-July.

SAN JUAN RIVER

For the San Juan basin the past month's storms have added to the water content of the snow at the high elevations, especially on Wolf Creek Pass where the accumulation was nearly 4 inches. For the lower elevations melting has occurred which is now appearing as increased flow of the river and its several tributaries. Soil moisture and likewise the range and crop conditions are generally good. Reservoir storage is improving. Vallecito during April accumulated about 10,000 acre-feet and now holds approximately 20,000. The runoff prospects for the coming season have not materially changed during April.

GREEN RIVER

The water content of the snow over the watershed of the Green, in Wyoming, increased on the average just one inch during April. There is now 3 inches more water in the snow than there was last year at this time. The present favorable outlook is the best since May 1, 1936. At that time the amount of snow-water averaged 13 inches whereas it now averages 11. The discharge of the Green at Linwood, Utah, is expected to exceed the estimated April-July flow of 1,000,000 acre feet, as determined a month ago, by about 200,000. Soil moisture throughout the Green River valley is generally good. The temperature during April was relatively low which has retarded the snow melt, however, streams appear to be at normal stage and may be expected to increase in flow rather rapidly during May with peak stage early in June.

GILA AND SALT RIVERS

Snow cover in Arizona and western New Mexico, on the watersheds of these streams, is practically all gone except for small patches on the high mountain peaks. What snow remains will add little to water supply for this season. The April runoff in the Salt and Verde rivers from snow, was quite substantial and resulted in a total flow of more than 150,000 acre-feet. The present storage in the principal reservoirs on the Salt aggregates 1,261,000 acre-feet which is 90 percent of the amount held last year at this time. Carl Pleasant reservoir has 28,000 acre-feet in storage and a year ago it had 34,000. April temperatures have been low and crops somewhat backward for this season of the year. In both the Prescott and Springerville areas the stream flow is normal and soil moisture conditions are good.

On the Gila watershed the present snow cover at extreme high elevations is insufficient to produce any marked runoff in the river flow this season. The storage in the San Carlos reservoir is now 123,000 acre-feet which is only 50 percent of that of last year at this time. Soil moisture in the upper valley areas is fairly good, in the lower farming districts it is subnormal. Crop planting is late due to unfavorable weather conditions.

GROUND WATER

There has been a general decline in ground-water levels in the Salt River Valley for the last three years with only a slight recovery during non-pumping periods.

SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for
COLORADO RIVER BASIN
May 1, 1945

P R E C I P I T A T I O N D A T A

| WATERSHED | STATE | Precipitation October 1 to April 30 Inches | Departure from Normal Inches | Precipitation April Inches | Departure from Normal Inches |
|-----------|------------|---|---------------------------------------|----------------------------------|---------------------------------------|
| Colorado | Colorado | 11.01 | -0.50 | 2.08 | -0.33 |
| Green | Wyoming | 6.70 | +0.75 | 1.30 | +0.32 |
| San Juan | New Mexico | 5.30 | -0.53 | 0.54 | -0.22 |
| Gila | Arizona | 8.63 | -0.05 | 0.26* | -0.64* |
| Gila | New Mexico | 5.64 | +0.06 | 0.10 | -0.36 |

*April precipitation tentative.

The accumulated precipitation since October 1 over the watershed of the Colorado River was below normal except on the Green in Wyoming and Gila in New Mexico. Precipitation during April was below normal everywhere except on the Green in Wyoming.

SUMMARY OF MAY 1 SNOW SURVEYS AND COMPARISON OF DATA WITH THAT OF PREVIOUS YEARS
BY WATERSHEDS

| WATERSHEDS | Snow Depth | | Water Content | | Number in Courses Average | Snow Density | | 1945 Water Content in percent of |
|------------------|----------------------|------|----------------------|------|------------------------------------|----------------------|---------|-------------------------------------|
| | Ten Year Avg.* | 1944 | Ten Year Avg.* | 1944 | | Ten Year Avg.* | 1944 | |
| COLORADO RIVER | In. | In. | In. | In. | | Percent | Percent | |
| Colorado River** | 33.6 | 40.5 | 11.6 | 12.6 | 20 | 35 | 31 | 122 |
| Yampa River | 33.8 | 43.8 | 14.2 | 15.6 | 4 | 42 | 36 | 150 |
| White River | 31.4 | 48.8 | 12.5 | 17.2 | 2 | 40 | 35 | 156 |
| Gunnison River | 41.2 | 63.3 | 15.2 | 21.9 | 10 | 37 | 35 | 126 |
| Dolores River | 18.4 | 47.8 | 6.5 | 15.2 | 3 | 36 | 32 | 113 |
| San Juan River | 31.8 | 58.0 | 13.8 | 22.8 | 5 | 43 | 39 | 119 |
| Green River | 19.2 | 25.3 | 7.0 | 7.9 | 4 | 36 | 31 | 154 |

*Some for shorter periods

**Above Grand Junction, Colorado

113
136
113
88
49
72
137

COLORADO RIVER WATERSHED

Summary of Federal and State Cooperative Snow Surveys
Issued May 10, 1945, at Fort Collins, Colorado

| Main Drainage and Snow Course | | Local Drainage | State | Location Locality | Description | Elev. | National Forest | May 1 Snow Cover Measurements | | | | | |
|---------------------------------------|-------------------|------------------|-------|----------------------|----------------------|-------|-----------------|-------------------------------|------|------------|------|---------|--|
| No. | Snow Course | | | | | | | Av. © 1944 | 1944 | Av. © 1945 | 1945 | Content | |
| | | | | | | | | In. | In. | In. | In. | In. | |
| COLORADO RIVER (Above Grand Junction) | | | | | | | | | | | | | |
| 7 | Park View* | Willow Cr. | Colo. | 7mi. SE. Rand | 24-5N-78W | 9200 | Routt | 20.5 | 26.5 | 27.5 | 7.5 | 7.1 | |
| 12 | Phantom Valley | Colorado R. | " | 11mi. N. Grand L. | 7-5N-75W | 9300 | Ry. Mtn. N. P. | 16.3 | 22.2 | 26.7 | 5.8 | 6.5 | |
| 16 | Berthoud Pass | Fraser R. | " | 4mi. S. West Port. | 35-2S-75W | 9700 | Arapaho | 42.9 | 51.5 | 49.0 | 14.8 | 16.2 | |
| 19 | Tennessee Pass* | Eagle River | " | Tennessee Pass | 21-8S-80W | 10200 | San Isabel | 16.4 | 25.4 | 24.3 | 5.2 | 8.6 | |
| 33 | Ind. Pass Tunnel | Lincoln Gulch | " | W. Port. Tunnel | 30-11S-82W | 10200 | White River | 43.0 | 55.2 | 52.3 | 15.9 | 17.3 | |
| 34 | N. Lost Trail Cr. | Crystal R. | " | 3mi. E. Marble | 20-11S-87W | 9200 | " | 29.9 | 43.2 | 41.2 | 11.1 | 16.8 | |
| 37 | M. Fork Camp Cr. | Williams Fk. | " | 13mi. N. Dillon | 16-3S-77W | 9000 | Arapaho | 16.4 | 31.7 | 33.4 | 5.4 | 9.5 | |
| 44 | Fiddler Gulch | Eagle River | " | 2mi. E. Mitchell | 1-8S-80W | 11000 | White River | 41.7 | 49.0 | 46.7 | 13.6 | 15.8 | |
| 45 | Mast | Frying Pan R. | " | 23mi. SE. Basalt | 1-9S-83W | 8700 | " | 4.4 | 7.7 | 5.0 | 1.1 | 2.5 | |
| 56 | Mesa Lakes | Mesa Creek | " | 15mi. E. Palisade | 35-11S-96W | 10000 | Grand Mesa | 47.4 | 73.3 | 60.1 | 17.2 | 22.9 | |
| 59 | Lulu | Lulu Creek | " | 14mi. N. Grand L. | 25-6N-76W | 10200 | Ry. Mtn. N. P. | 56.1 | -- | 61.2 | 19.7 | -- | |
| 62 | Willow Creek P. | Willow Cr. | " | Willow Cr. Pass | 1-4N-78W | 9500 | Arapaho | 34.2 | 33.1 | 37.6 | 12.8 | 9.1 | |
| 64 | N. Inlet Grand L. | N. Inlet Cr. | " | 4mi. NE. Grand L. | 26-4N-75W | 9000 | Ry. Mtn. N. P. | 24.6 | 24.9 | 34.7 | 8.4 | 7.7 | |
| 65 | Lake Irene | Beaver Creek | " | 1mi. SW. Milner P. | 8-5W-75W | 10600 | " | 66.2 | 67.8 | 73.2 | 23.8 | 21.4 | |
| 66 | Thunderbolt Peak | Buchanan Cr. | " | 5mi. E. Monarch L. | 22-2N-74W | 9500 | Arapaho | 38.4 | 43.0 | 30.1 | 14.7 | 13.8 | |
| 69 | Arrow | S. Ranch Cr. | " | Arrow | 34-1S-75W | 9900 | " | 25.3 | 31.2 | 36.8 | 7.4 | 9.4 | |
| 70 | Lapland | St. Louis Cr. | " | 7mi. SW. Fraser | 16-2S-76W | 9300 | " | 23.4 | 36.0 | 36.0 | 7.5 | 12.2 | |
| 79 | Fremont Pass #2 | Blue River | " | Fremont Pass | 2-8S-79W | 11400 | " | 49.6 | 49.4 | 50.6 | 16.7 | 14.7 | |
| 91 | Lynx Pass No. 2 | Rock Cr. | " | 7mi. NE. Toponas | 27-2N-83W | 9100 | Routt | 23.0 | 30.2 | 34.0 | 8.5 | 9.1 | |
| 96 | Shrine Pass | Blue River | " | Shrine Pass | 15-6S-79W | 10500 | Arapaho | 50.8 | 49.7 | 53.7 | 16.6 | 14.7 | |
| 97 | Grizzly Peak | " | " | 1mi. W. Loveland P. | 2-5S-76W | 11250 | " | 56.9 | 59.4 | 56.3 | 18.6 | 17.3 | |
| | | | | | Average for Drainage | | | 33.6 | 40.5 | 40.5 | 11.6 | 12.6 | |
| YAMPA RIVER | | | | | | | | | | | | | |
| 6 | Dry Lake | Soda Creek | Colo. | 4mi. NE. Steam. Spgs | 26-7N-84W | 8200 | Routt | 33.5 | 45.8 | 51.1 | 15.9 | 18.6 | |
| 8 | Columbine Lodge* | Harrison Cr. | " | Rbt. Ears Pass | 21-5N-82W | 9300 | " | 46.7 | 59.1 | 62.0 | 19.4 | 20.1 | |
| 9 | Elk River | Independence Cr. | " | Columbine | 6-10N-85W | 8700 | " | 32.1 | 40.2 | 51.8 | 12.9 | 14.5 | |
| 91 | Lynx Pass No. 2* | Morrison Cr. | " | 7mi. NE. Toponas | 27-2N-83W | 9100 | " | 23.0 | 30.2 | 34.0 | 8.5 | 9.1 | |
| 10 | Rambler R.S. | Little Snake R. | Wyo. | 13mi. SW. Encampmt | 25-14N-86W | 8600 | Medicine Bow | -- | 55.0 | -- | -- | 21.9 | |
| | | | | | Average for Drainage | | | 33.8 | 43.8 | 49.7 | 14.2 | 15.6 | |
| WHITE RIVER | | | | | | | | | | | | | |
| 35 | Burro Mountain | N. Elk Creek | Colo. | 8mi. S. Buford | 15-2S-91W | 9000 | White River | 40.0 | 66.2 | 54.5 | 15.4 | 22.0 | |
| 36 | Rio Blanco | White River | " | 4mi. NW. Trappers L. | 28-1N-88W | 8500 | " | 22.9 | 31.3 | 37.8 | 9.6 | 12.3 | |
| | | | | | Average for Drainage | | | 31.4 | 48.8 | 46.2 | 12.5 | 17.2 | |

*On adjacent drainage @Average for period of record

*On adjacent drainage @Average for period of record

COLORADO RIVER WATERSEED

Summary of Federal and State Cooperative Snow Surveys
Issued May 10, 1945, at Fort Collins, Colorado

| Main Drainage and Snow Course | Local Drainage | State | Location | | Elev. | National Forest | May 1 Snow Cover Measurements | | | | | |
|-------------------------------|----------------|---------|---------------------|-------------|-------|-----------------|-------------------------------|-------------------|----------|----------|----------|------|
| | | | Locality | Description | | | Av. Snow Depth | Av. Water Content | 1944 | 1945 | 1944 | 1945 |
| GUNNISON RIVER | | | | | | | | | | | | |
| 18 Crested Butte | Slate River | Colo. | 3mi. N. Crested B. | 22-13S-86W | 9000 | Gunnison | In. 16.5 | In. 33.3 | In. 16.4 | In. 13.1 | In. 13.1 | |
| 42 Marshall Creek | Marshall Cr. | " | Marshall Pass | 24-43N-6E | 10300 | " | 32.0 | 45.5 | 10.9 | 14.1 | 16.1 | |
| 43 Poncha Creek* | " | " | " | 19-43N-7E | 10500 | San Isabel | 25.9 | 41.6 | 8.8 | 13.2 | 15.1 | |
| 53 Alexander Lake | Kiser Creek | " | 10mi. N. Cedaredge | 2-12S-89W | 10000 | Grand Mesa | 55.9 | 97.6 | 25.4 | 33.7 | 29.4 | |
| 55 Snowshoe Mesa | Snowshoe Cr. | " | 16mi. NE. Paonia | 14-13S-89W | 7500 | Gunnison | 2.1 | 6.3 | 0.9 | 2.9 | 4.8 | |
| 58 Ironton Park | Red Mtn. Cr. | " | 5mi. S. Ouray | 29-43N-7W | 9300 | Uncompahgre | 27.7 | 60.4 | 10.4 | 22.2 | 13.5 | |
| 85 Trickle Divide | Surface Cr. | " | 13mi. N. Cedaredge | 23-11S-94W | 10000 | Grand Mesa | 34.9 | 118.5 | 32.2 | 43.0 | 36.8 | |
| 87 Park Reservoir | " | " | 11mi. " | 34-11S-94W | 9500 | " | 73.8 | 104.8 | 28.5 | 38.1 | 32.7 | |
| 89 Porphyry Creek | Porphyry Cr. | " | Monarch Pass | 19-49N-6E | 10300 | Gunnison | 53.9 | 63.8 | 18.5 | 20.0 | 20.5 | |
| 94 Sunshine Mt. No. 2 | Henson Cr. | " | 10mi. W. Lake City | 35-44N-6W | 10200 | Gunnison | 29.6 | 56.4 | 9.8 | 15.8 | 9.5 | |
| 98 Taylor Res. | Taylor River | " | Taylor Park Res. | 24-14S-83W | 9100 | " | -- | -- | -- | -- | 7.3 | |
| Average for Drainage | | | | | | | | | | | | |
| DOLORES RIVER | | | | | | | | | | | | |
| 23 Rico | Dolores R. | Colo. | 2mi. S. Rico | 11-38N-11W | 8700 | Montezuma | 41.2 | 63.3 | 15.2 | 21.9 | 19.2 | |
| 24 Telluride | San Miguel R. | " | Telluride | 6-42N-8W | 8600 | " | 5.6 | 35.1 | 1.7 | 8.5 | 1.1 | |
| 25 Lizard Head | Dolores R. | " | 10mi. N. Rico | 24-41N-10W | 10300 | " | 5.9 | 34.0 | 1.9 | 12.1 | 2.4 | |
| 90 Lone Cone | Ground Hog Cr. | " | 16mi. N. W. Rico | 23-41N-13W | 8900 | " | 43.6 | 74.3 | 16.3 | 25.1 | 19.1 | |
| Average for Drainage | | | | | | | | | | | | |
| SAN JUAN RIVER | | | | | | | | | | | | |
| 26 Wolf Creek Pass* | Wolf Creek | Colo. | Wolf Creek Pass | 4-37N-2E | 10000 | Rio Grande | 18.4 | 47.8 | 6.6 | 15.2 | 7.5 | |
| 29 Upper San Juan | " | " | 4mi. W. Wolf Cr. P. | 10-37N-1E | 10000 | San Juan | 53.9 | 101.4 | 28.4 | 40.5 | 37.0 | |
| 30 Silverton Sub. S. | Animas R. | " | 2mi. NE. Silverton | 10-41N-7W | 9400 | " | 75.2 | 117.2 | 32.8 | 47.6 | 39.6 | |
| 31 Cascade | Cascade Cr. | " | 5mi. N. Electra L. | 12-39N-9W | 8850 | " | 5.1 | 26.0 | 1.8 | 8.4 | 5.5 | |
| 93 Granite Peaks | Los Pinos R. | " | 11mi. NE. Columbus | 24-37N-6W | 7950 | San Juan | 11.1 | 40.0 | 4.0 | 14.5 | 0.0 | |
| 17 Chama Divide* | Amargo R. | N. Mex. | 6mi. W. Chama | 36.9N106.7W | 7750 | Off Forest | 3.5 | 5.6 | 1.8 | 2.9 | -- | |
| 18 Chamita* | Navajo R. | " | 6mi. N. W. Chama | 36.9N106.7W | 8500 | " | -- | -- | -- | -- | -- | |
| Average for Drainage | | | | | | | | | | | | |
| | | | | | | | 31.8 | 58.0 | 13.8 | 22.8 | 16.4 | |

*On adjacent drainage.

©Average for period of record.

COLORADO RIVER WATERSHED

Summary of Federal and State Cooperative Snow Surveys
Issued May 10, 1945, at Fort Collins, Colorado

| No. | Main Drainage and Snow Course | Local Drainage | State | Locality | Description | Elev. | National Forest | May 1 Snow Cover Measurements | | | | | |
|-----|-------------------------------|----------------|-------|--------------------|----------------------|-------|-----------------|-------------------------------|------|-------------------|------|------|------|
| | | | | | | | | Av. Snow Depth | | Av. Water Content | | | |
| | | | | | | | | 1944 | 1945 | 1944 | 1945 | In. | In. |
| 23 | GREEN RIVER | Dutch Joe Cr. | Wyo. | 12mi. N. Elkhorn | 33-31N-10W | 8700 | Wyoming | 11.4 | 16.7 | 33.4 | 3.4 | 5.9 | 6.7 |
| 24 | | Surveyor Cr. | " | Fremont Lake | 17-35N-10W | 8900 | " | 17.2 | 17.4 | 25.5 | 6.3 | 5.8 | 8.9 |
| 25 | | Green River | " | 27mi. NW. Pinedale | 23-38N-11W | 7900 | " | | 12.3 | | | 4.2 | |
| 26 | | Beaver Cr. | " | 25mi. NW. | 14-37N-11W | 8500 | " | | 24.0 | | | 7.6 | |
| 27 | | S. Piney Cr. | " | 22mi. W. BigPiney | 15-29N-11W | 8040 | " | 16.7 | 26.2 | 29.6 | 6.2 | 6.7 | 11.0 |
| 28 | | LaBarge Cr. | " | 24mi. W. BigPiney | 19-29N-11W | 8820 | " | 31.7 | 40.9 | 43.6 | 12.3 | 13.2 | 16.8 |
| | | | | | Average for Drainage | | | 19.2 | 25.3 | 33.0 | 7.0 | 7.9 | 10.8 |

*Average for period of record

RESERVOIR STORAGE

Reservoir Storage in Thousands of Acre-Feet, Colorado and Arizona, as of May 1 for the year 1936 to 1945, inclusive. (Based on data from the Bureau of Reclamation, Salt River Water Users' Association and other agencies.) A = Percentage of capacity. B = Percentage of 10-year average. C = Percentage of filling forecast for 1945.

| Reservoir | Capacity | 1936 | 1937 | 1938 | 1939 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 10-yr. | | A | B | C |
|-------------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|-----|---|-----|
| | Ac-ft. | Ac-ft. | Ac-ft. | Ac-ft. | Ac-ft. | Ac-ft. | Ac-ft. | Ac-ft. | Ac-ft. | Ac-ft. | Ac-ft. | Avg. ft. | Ac-ft. | | | |
| UPPER COLORADO DRAINAGE | | | | | | | | | | | | | | | | |
| Taylor Park | 106.2 | -- | -- | 32.8 | 78.0 | 45.0 | 32.7 | 83.2 | 68.0 | 88.4 | 65.4 | 61.7 | 62 | 106 | | 100 |
| Vallecito | 126.3 | -- | -- | -- | -- | -- | 1.9 | 44.1 | 60.2 | 38.2 | 19.3 | 32.7 | 15 | 59 | | |
| Ground Hog | 21.7 | -- | -- | -- | -- | 2.1 | 1.5 | 21.2 | 14.5 | 14.0 | 8.0 | 10.2 | 37 | 78 | | |
| Green Mtn. | 146.9 | -- | -- | -- | -- | -- | -- | -- | 58.2 | 41.3 | 49.6 | 49.7 | 34 | 100 | | |
| SALT AND GILA DRAINAGES | | | | | | | | | | | | | | | | |
| Roosevelt | 1420.0 | 507.6 | 978.0 | 437.4 | 94.1 | 11.1 | 1398.4 | 1366.3 | 1182.2 | 914.6 | 788.4 | 767.8 | 55 | 102 | | |
| Horse Mesa | 245.1 | 237.8 | 240.3 | 236.2 | 213.5 | 68.4 | 239.6 | 224.9 | 236.4 | 237.6 | 239.1 | 217.4 | 98 | 110 | | |
| Mormon Flat | 58.0 | 40.4 | 33.3 | 47.2 | 42.2 | 50.8 | 57.2 | 46.4 | 43.8 | 49.8 | 52.7 | 46.4 | 91 | 114 | | |
| Stewart Mt. | 70.0 | 41.9 | 59.9 | 50.8 | 42.2 | 35.4 | 65.9 | 58.1 | 60.9 | 54.8 | 60.4 | 53.0 | 86 | 114 | | |
| Bartlett | 200.0 | -- | -- | -- | -- | 1.8 | 182.6 | 101.8 | 35.2 | 148.0 | 120.7 | 98.4 | 60 | 123 | | |
| Carl Pleasant | 173.0 | 12.8 | 102.7 | 25.9 | 8.6 | 5.3 | 184.5 | 70.8 | 4.8 | 34.6 | 27.4 | 47.7 | 16 | 57 | | |
| San Carlos | 1200.0 | 169.4 | 261.1 | 68.5 | 21.0 | 34.0 | 691.6 | 792.1 | 519.9 | 243.0 | 122.9 | 292.4 | 10 | 42 | | |

p Some averages for shorter periods

The following organizations cooperate in the snow surveys and irrigation water supply forecasts for the Colorado, Missouri-Arkansas and Rio Grande watersheds by furnishing funds or services.

STATE

Colorado State Engineer
Wyoming State Engineer
Utah State Engineer
New Mexico State Engineer
Montana State Engineer
Nebraska State Engineer
Colorado Experiment Station
Colorado Extension Service
Montana Experiment Station
Utah Experiment Station

FEDERAL

Department of Agriculture
Forest Service
Soil Conservation Service
Department of Interior
Bureau of Reclamation
Indian Service
Geological Survey
National Park Service
Department of Commerce
Weather Bureau
War Department
Army Engineer Corps

PUBLIC UTILITIES

Colorado Public Service Company
Western Colorado Power Company
Montana Power Company
Denver and Rio Grande Western R. R. Company

MUNICIPALITIES

City of Bozeman
City of Denver
City of Boulder

WATER USERS ORGANIZATIONS

Poudre Valley Water Users' Association
Arkansas Valley Ditch Association
Colorado River Water Conservation District

IRRIGATION PROJECTS

Farmers Reservoir and Irrigation Company
San Luis Valley Irrigation District
Santa Maria Reservoir Company
Costilla Land Company
Uncompahgre Valley Water Users' Association
Wyoming Development Company
Goshen Irrigation District
Kendrick Project
Pathfinder Irrigation District
Salt River Valley Water Users' Association
San Carlos Irrigation and Drainage District

Many other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

